

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 21-38 are pending in this application. Claims 1-20 are canceled by the present response and claims 21-38 are added by the present response. Claims 1-4, 6-9, 11-14, and 16-19 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 5,196,835 to Blue et al. (herein "Blue") in view of U.S. patent 6,215,116 B1 to Van Marcke. Claims 5, 10, 15, and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Blue and Van Marcke as applied to claim 3, and further in view of JP 09319501 A to Fumihiko et al. (herein "Fumihiko").

Addressing the above-noted rejections, those rejections are traversed by the present response.

Initially, applicants wish to point out that certain remarks presented in the Amendment filed March 17, 2003, were erroneous. Specifically, in that Amendment it was stated that "wherein a threshold calculated based upon the detection of the farthest optical element from the designating device is set to said first threshold". Applicants have realized that statement is incorrect. The operation of the device of the present invention is such that the threshold calculation based upon the detection of the further position in the coordinate inputting/detecting area from the optical unit is not set to the first threshold, but is set to the second threshold to detect the pointer inserted into the furthest position.

By the present response each of previously pending claims 1-20 is cancelled and new claims 21-38 are presented for examination, of which new claim 21 is an independent claim. New claim 21 has been amended to clarify the operation in the present invention. The operation in the claims is also supported by Figures 7A-7C in the present specification and the corresponding description therein.

As discussed in the present specification, at step S4 of Figure 7A it is determined whether the designating device has been inserted into a coordinate inputting plane in the coordinate/inputting detecting area. As noted in the present specification at page 16, lines 1-11, such an operation is based on whether the signal from a light receiving element exceeds a first predetermined threshold. Then, in step S19 a second higher threshold is utilized for obtaining coordinates of the designating device 4 in the coordinate inputting/detecting area 3, see also the present specification at page 19, line 12 etc.

New claims 21-36 have been written to clarify the operation in the present invention. Specifically, independent claim 21 positively recites:

wherein said optical unit recognizes insertion of the pointer when said detection signal exceeds a first threshold value, said detection allowing a coordinate calculation operation, and wherein said controller calculates the coordinates based on the detection signal exceeding a second threshold value higher than the first threshold value.

As noted above, Figures 7A-7C are consistent with the above-noted claim language. The above-noted claim language is also believed to clearly distinguish over the applied art.

Van Marcke is cited to disclose the use of two thresholds, but Van Marcke discloses that the two thresholds are simply used to increase or decrease pulse-emitting power when a value of a returned and amplified detection pulse deviates from the thresholds. In addition, in Van Marcke such a control is executed after a moving objective is detected, see step S303 and S307, as well as when a valve is open, see step S308, so that the amplitude of the detection pulse can be accurately measured, see also column 11, lines 17-20. In other words, in Van Marcke the thresholds enable detection of the presence of the moving object on a condition that the amplitude of the detection pulse ranges between the thresholds.

However, in contrast to the claims as currently written, Van Marcke does not disclose or suggest that the first threshold of Van Marcke operates to detect the insertion of the moving object.

That is, in contrast to Van Marcke, in the claims as currently written when an insertion of a pointer generates a signal exceeding a first threshold the optical unit recognizes insertion of that pointer. Van Marcke does not disclose the first threshold therein utilized in that manner.

Further, in the claims as currently written it is the detection of the pointer exceeding a second higher threshold that results in calculating the coordinates of the pointer. Such a further operation is neither taught nor suggested by VanMarcke. Further, with such an operation in the claimed invention the coordinates are calculated only when the detection signal exceeds the higher second threshold, and as a result a tailing error can be suppressed.

In such ways, the two thresholds utilized in the claims as currently written differ from the thresholds in Van Marcke, and in such ways the claims as currently written are believed to distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

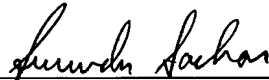
Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



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Tel: (703) 413-3000  
Fax: (703) 413 -2220

  
\_\_\_\_\_  
Gregory J. Maier  
Registration No. 25,599  
Surinder Sachar  
Registration No. 34,423  
Attorneys of Record